

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A retrieval catheter, comprising:
 - a catheter wall defining a catheter lumen and a distal tip that is tapered toward an open distal orifice defining a distal end of the catheter lumen, the wall over the length of the tapered tip configured to distend to expand the distal orifice; and
 - a distender disposed in the catheter lumen and configured to press radially outwardly the catheter wall at the distal tip to expand the distal orifice, the distender having ~~a distal end annulus and a proximal end annulus separated by a radially outward facing circumferential wall~~ an annular distender ring and a frusto-conical annular element co-axial with the annular distender ring, the annular element positioned proximal of the distender ring with its larger diameter end contiguous therewith, and an axial lumen extending through the distender between ~~said distal and proximal annuli~~ the annular distender ring and the frusto-conical annular element, and a pusher shaft that extends proximally beyond a proximal end of the catheter lumen and that is configured to push the distender distally until the annular distender ring ~~distal end annulus~~ is distal of the catheter distal orifice and the open distal orifice of the catheter is distended.
2. (Withdrawn) The retrieval catheter according to claim 1, wherein the catheter is configured to aspirate material from a bodily lumen distal of the distal tip.

3. (Withdrawn) The retrieval catheter according to claim 2, including a distal aspiration port in the wall of the catheter adjacent to or at the distal tip.

4. (Previously presented) The retrieval catheter according to claim 1, configured as an over-the-wire catheter.

5. (Withdrawn) The retrieval catheter according to claim 1, configured as a rapid exchange catheter, including a proximal guidewire exit port remote from the proximal end of the catheter.

6. (Withdrawn) The retrieval catheter according to claim 5, including a proximal aspiration port in the wall of the catheter distal of said guidewire exit port.

7. (Previously presented) The retrieval catheter according to claim 1, including a guide catheter with a lumen to receive the retrieval catheter.

8. (Previously presented) The retrieval catheter according to claim 7, wherein the guide catheter has a tapered distal end portion and the retrieval catheter is a snug fit with a distal end orifice of the tapered distal end portion of the guide catheter.

9. (Previously presented) The retrieval catheter according to claim 1, wherein the distender comprises radiopaque material.

10. (Previously presented) The retrieval catheter according to claim 1, wherein the catheter wall includes an annular radiopaque marker adjacent the distal tip.

11. (Canceled).

12. (Currently amended) The retrieval catheter according to claim 1 [[11]], wherein the distender ring comprises radiopaque material.

13. (Currently amended) The retrieval catheter according to claim 1, wherein the annular distender ring ~~distender distal end annulus~~ exhibits an end face transverse to the axis of the lumen of the distender.

14. (Currently amended) The retrieval catheter according to claim 1, further comprising a device to be retrieved, the device including a pull line having a length to extend from the device to at least the proximal end of the catheter lumen, the annular distender ring ~~distender distal end annulus~~ configured to receive at least a proximal portion of the device.

15. (Withdrawn) The retrieval catheter according to claim 14, wherein the device is a lumen occlusion balloon.

16. (Previously presented) The retrieval catheter according to claim 14, wherein the device is a filter for filtering passage of bodily fluid within a bodily lumen.

17. (Previously presented) The retrieval catheter according to claim 1, wherein the pusher shaft comprises a stainless steel hypotube.

18. (Previously presented) A retrieval catheter, comprising:
a catheter shaft including a tapered distal tip configured to distend; and
a distender disposed in a lumen of the catheter shaft, including a generally tubular body having a lumen and an annular element positioned about an outer surface of the body, the annular element having an outside diameter larger than an inside diameter of at least a distal end of the distal tip.

19. (Previously presented) The retrieval catheter according to claim 18, wherein the distender includes a return cone positioned about an outer surface of the body proximal of the annular element, the return cone having a frusto-conical configuration with a large diameter end approximately equivalent to the outside diameter of the annular element, the large diameter end contiguous with the annular element.

20. (Previously presented) The retrieval catheter according to claim 19, wherein the annular element and return cone are bonded to the body by an adhesive.

21. (Previously presented) The retrieval catheter according to claim 18, wherein the distender includes a pusher element.

22. (Previously presented) The retrieval catheter according to claim 21, wherein the pusher element comprises stainless steel, and wherein a distal end of the pusher element is bonded to the body.

23. (Previously presented) The retrieval catheter according to claim 21, wherein the pusher element extends from the distender positioned in a distal end of the catheter lumen to at least a proximal end of the catheter lumen.

24. (Previously presented) The retrieval catheter according to claim 23, wherein the pusher element includes a lumen, a proximal opening and a distal opening.

25. (Previously presented) The retrieval catheter according to claim 18, wherein the catheter shaft includes a first opening in a wall thereof positioned adjacent the distal tip and a second opening in the catheter shaft wall spaced proximally from the first opening.

26. (Previously presented) The retrieval catheter according to claim 25, further comprising a guide catheter including a tapered distal tip, the catheter shaft disposed in a lumen of the guide catheter and having an aspirating position wherein the first opening is distal to the guide catheter distal tip and the second opening is proximal thereto in the guide catheter lumen.

27. (Previously presented) The retrieval catheter according to claim 18, wherein the catheter shaft includes a radiopaque marker adjacent the distal tip.

28. (Previously presented) The retrieval catheter according to claim 18, wherein the annular element includes a radiopaque material.

29. (Previously presented) A method for retrieving a medical device, comprising:

providing a retrieval catheter including a catheter shaft with a tapered distal tip configured to distend, and a distender disposed in a lumen of the catheter shaft, including a generally tubular body having a lumen and an annular element positioned about an outer surface of the body;
positioning the retrieval catheter adjacent a medical device in a bodily lumen;
moving the distender distally in the catheter shaft lumen and at least a portion of the distender distal of the distal tip, the annular element distending the distal tip; and
pulling at least a proximal portion of the medical device into a lumen of the body.

30. (New) The retrieval catheter according to claim 1, wherein the distender further comprises a distal end annulus and a proximal end annulus separated by a radially outward-facing circumferential wall, wherein a portion of the circumferential wall is radially inside the frusto-conical annular element and co-axial with the annular distender ring.